WHAT IS CLAIMED IS:

1. A computer implemented method for placing feathers on a surface, comprising:

establishing a plurality of vertices on a surface;

establishing a growing direction for each of the plurality of vertices on the surface; and

placing feathers on the surface based on the plurality of vertices and the growing direction.

2. The method of claim 1 wherein placing further comprises placing key feathers at selected vertices and interpolating to place other feathers on the surface between the selected vertices.

3. The method of claim 1 wherein placing further comprises recursively placing the feathers on the surface based on the growing direction.

4. The method of claim 3 and further comprising:

detecting collisions between adjacent feathers; and

adjusting the growing direction such that the feathers do not collide.

5. The method of claim 1 wherein the plurality of vertices form similarly shaped polygons and

wherein establishing includes evenly distributing the plurality of vertices over the surface.

6. The method of claim 1 wherein establishing includes establishing vertices over a body of a bird.

7. The method of claim 1 wherein establishing includes establishing vertices over a wing skeleton.

8. The method of claim 1 wherein establishing includes establishing vertices over a tail skeleton.

9. The method of claim 1 and further comprising re-tiling the surface so the vertices are evenly distributed.

10. A method for placing feathers on a surface, comprising:

establishing a plurality of vertices on a surface, each vertex having a growing direction; and

performing a recursive algorithm to place a feather at each vertex, comprising:

finding a growing direction for vertices in the growing direction of the vertex;

if the feather at the vertex collides with another feather, then adjusting the growing direction of the

vertex until there is no collision.

11. The method of claim 10 and further comprising receiving a shape of the feather.

12. The method of claim 10 wherein the plurality of vertices form similarly shaped polygons and wherein establishing includes evenly distributed the plurality of vertices over the surface.

13. The method of claim 10 wherein establishing includes establishing the plurality of vertices over a body of a bird.

14. The method of claim 10 wherein establishing includes establishing the plurality of vertices over a wing skeleton.

15. The method of claim 10 wherein establishing includes establishing the plurality of vertices over a tail skeleton.

16. The method of claim 10 and further comprising re-tiling the surface so the vertices are evenly distributed.